



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0729; Project Identifier MCAI-2021-00364-R; Amendment 39-21948; AD 2022-04-06]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2021-06-06, which applied to certain Bell Textron Canada Limited Model 505 helicopters. AD 2021-06-06 required repetitive fluorescent penetrant inspections (FPIs) of the pilot collective stick and grip assembly and revising the existing Rotorcraft Flight Manual (RFM) for your helicopter. Since the FAA issued AD 2021-06-06, the pilot collective stick and grip assembly has been redesigned. This AD retains certain requirements of AD 2021-06-06, requires modifying your helicopter to include the improved pilot collective stick tube and adds a terminating action for the repetitive FPIs. This AD also prohibits installing any pilot collective stick and grip assembly unless certain requirements of this AD are met. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of March 31, 2021 (86 FR 14366, March 16, 2021).

ADDRESSES: For service information identified in this final rule, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone 1-450-437-

2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. Service information that is incorporated by reference is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA 2021-0729.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0729; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the Transport Canada AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2021-06-06, Amendment 39-21473 (86 FR 14366, March 16, 2021) (AD 2021-06-06), for Bell Textron Canada Limited Model 505 helicopters, serial number (S/N) 65011 and subsequent. The NPRM published in the *Federal Register* on September 14, 2021 (86 FR 51035). In the NPRM, the FAA proposed to retain some of the requirements of AD 2021-06-06, including, before further flight, revising Section 1, the Limitations section of the existing RFM for your helicopter to prohibit single pilot operations from the right crew seat, require the pilot in command (PIC) to occupy the left crew seat for dual pilot operations, and depending on configuration, prohibit the use of

SPLIT-COM mode. The NPRM also proposed to require, before further flight, and thereafter at intervals not to exceed 25 hours time-in-service (TIS), removing the pilot collective stick and grip assembly and performing an FPI for a crack and depending on the inspection results, removing a certain part from service. The NPRM proposed to require, within 12 months, removing a certain part-numbered pilot collective stick tube from service and installing an improved pilot collective stick tube in accordance with the manufacturers service information and thereafter, removing a certain part-numbered pilot collective stick tube from service before it accumulates 300 total hours TIS.

Additionally, the NPRM would consider certain proposed actions to be a terminating action for other actions proposed in the NPRM. The NPRM also proposed to prohibit installing any pilot collective stick and grip assembly unless certain proposed actions were accomplished. Finally, the NPRM proposed to require revising the Limitations section of the existing RFM for your helicopter; the owner/operator (pilot) may incorporate the RFM revisions and the owner/operator must enter compliance with the applicable paragraphs of the AD into the aircraft records in accordance with 14 CFR 43.9(a)(1) through (4) and 14 CFR 91.417(a)(2)(v). This is an exception to the FAA's standard maintenance regulations.

The NPRM was prompted by Transport Canada AD CF-2021-05R3, dated March 19, 2021 (Transport Canada AD CF-2021-05R3), issued by Transport Canada, which is the aviation authority for Canada, to correct an unsafe condition for Bell Textron Canada Limited Model 505 helicopters, S/Ns 65011 through 65347. Transport Canada advises that the pilot collective stick and grip assembly has been redesigned to address the root cause of the cracking. Accordingly, Transport Canada AD CF-2021-05R3 retains the requirements of Transport Canada Emergency AD CF-2021-05R2, dated March 4, 2021 (Transport Canada Emergency AD CF-2021-05R2), which prompted AD 2021-06-06, and requires installing the newly designed pilot collective stick and grip assembly, which is a terminating action for the requirements of Transport Canada Emergency AD CF-2021-05R2. Transport Canada AD CF-2021-05R3 also revises the applicability to include only helicopters that have not incorporated the redesigned pilot collective stick and grip assembly during production.

Therefore, the FAA determined that it is necessary to supersede AD 2021-06-06 and the required actions as proposed in the NPRM include a terminating action for the repetitive FPI inspections.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter; Bell. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request for Changes to the Required Actions

Bell requested that the FAA revise the life limit of pilot collective stick tube part number (P/N) M207-20M301-043. Bell stated that 300 total hours TIS was only an interim life limit and after the completion of fatigue testing, the life limit of 6,250 total hours TIS has been approved by Transport Canada. Specifically, Bell requested that the FAA change the required action to, "Replace the pilot collective stick tube P/N M207-20M301-043 at or before reaching its Life Limit as defined in Table 1 of the Maintenance Planning Information (MPI) Chapter 4 Airworthiness Limitations Schedule (ALS), BHT-505-MPI Chapter 4 Issue 09, dated 12 March 2021, or later revisions of the ALS approved by Transport Canada."

The FAA partially agrees. The FAA disagrees with changing the action from removing the pilot collective stick tube from service to "replace the pilot collective stick tube" because this is a life limit and, once the life limit is reached, the part must be removed from service and never installed on any aircraft again. Additionally, due to eligibility requirements in 1 CFR part 51, the FAA cannot mandate use of "later revisions" of service information directly in an AD. However, the FAA agrees with the life limit threshold increasing from 300 total hours TIS to 6,250 total hours TIS and, accordingly has changed that life limit in this final rule.

Bell requested that the FAA revise paragraph (g)(6) of the Required Actions that states relief under any Master Minimum Equipment List or Minimum Equipment List for the Audio Panel is prohibited when the aircraft is operated with a single pilot. Bell stated that this restriction is only applicable when operated from the left hand seat, and the

aircraft must be flown from the right hand seat when SPLIT-COM mode is enabled. Bell further stated this is consistent with the limitations of the flight manual.

The FAA agrees and has revised the required actions in this final rule accordingly.

Request for Changes to the Credit for Previous Actions

Bell requested that the FAA allow credit for the required actions through an approved AMOC and service information. Bell stated that the FAA approved an AMOC to AD 2021-06-06 on March 26, 2021, which allowed operators to implement a terminating action based on the instructions contained in Bell Alert Service Bulletin 505-21-20, Revision C, dated March 11, 2021 (ASB 505-21-20 Rev C). Bell requested that the approved AMOC and ASB 505-21-20 Rev C be included in the Credit for Previous Actions paragraph.

The FAA agrees with the request to allow credit; however, the FAA disagrees with putting this information in the Credit for Previous Actions paragraph. The FAA agrees that the previously approved AMOC to AD 2021-06-06 continues to be valid to address the unsafe condition. Accordingly, the FAA has revised the AMOC paragraph in this final rule by adding paragraph (j)(3), which states “AMOCs approved previously for AD 2021-06-06 are approved as AMOCs for the corresponding requirements in paragraph (g) of this AD.” Additionally, the purpose of the Credit for Previous Actions paragraph is to allow credit for required actions accomplished previously in accordance with previous revision(s) of service information. Since ASB 505-21-20 Rev C is required to accomplish certain actions in paragraph (g) of this AD, previous accomplishment of those actions in ASB 505-21-20 Rev C could be considered accomplished by paragraph (f) of this AD.

Other Changes Between the NPRM and this Final Rule

In this final rule, the FAA has changed the effective date of paragraph (g)(1) from “after the effective date of this AD” to “from March 31, 2021 (the effective date of AD 2021-06-06),” because this paragraph carries-over identical required actions from paragraph (g)(1) of AD 2021-06-06.

Conclusion

These helicopter have been approved by the aviation authority of Canada and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with Canada, Transport Canada, its technical representative, has notified the FAA of the unsafe condition described in its AD. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed ASB 505-21-20 Rev C, which provides instructions for an initial and repetitive FPIs for cracks in the pilot collective stick and grip assembly P/N M207-20M478-041/-043/-047 on Bell Textron Canada Limited Model 505 helicopters, serial numbers 65011 through 65347. ASB 505-21-20 Rev C also specifies inserting a temporary revision (TR) into the RFM that prohibits single pilot operations from the right crew seat until further notice, and specifies that if the right crew seat pilot collective stick and grip assembly was previously confirmed serviceable following an FPI, then the 25 flight hour repetitive FPI of the right crew seat pilot collective stick and grip assembly is no longer required provided that the helicopter is only operated single PIC from the left crew seat. ASB 505-21-20 Rev C also introduces procedures to install an improved pilot collective stick tube assembly, along with its initial life limit, and which is also terminating action for the repetitive FPIs and temporary RFM revision.

The FAA also reviewed Bell 505 RFM TR for Pilot Collective (ASB 505-21-20), BHT-505-FM-1, Temporary Revision (TR-6) (BHT-505-FM-1, TR-6) and Bell 505 RFM TR for Pilot Collective (ASB 505-21-20), BHT-505-FM-2, Temporary Revision (TR-1), each dated March 3, 2021. These temporary revisions specify changes to Section 1 of the RFM Limitations Section that the minimum flight crew consists of one pilot that shall operate from the left crew seat and that dual operation is approved provided that the PIC occupies the left crew seat. BHT-505-FM-1, TR-6 also prohibits use of SPLIT-COM

mode.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA reviewed Bell ASB 505-21-20, dated February 20, 2021 (ASB 505-21-20), Bell ASB 505-21-20, Revision A, dated February 26, 2021 (ASB 505-21-20 Rev A), and Bell ASB 505-21-20, Revision B, dated March 3, 2021 (ASB 505-21-20 Rev B). ASB 505-21-20 specifies a one-time inspection for cracks of the pilot collective stick and grip assembly. ASB 505-21-20 Rev A removes the visual inspection and adds a repetitive FPI. ASB 505-21-20 Rev B adds the RFM temporary revision and clarifies the compliance time of the repetitive FPI.

Differences Between this AD and Transport Canada AD CF-2021-05R3

This AD prohibits relief under any Master Minimum Equipment List or Minimum Equipment List for the Audio Panel when the aircraft is operated with a single pilot from the left seat, whereas Transport Canada AD CF-2021-05R3 does not. Transport Canada AD CF-2021-05R3 requires the repetitive FPIs if the aircraft is not flown solely from the left crew seat whereas this AD requires repetitive FPIs regardless.

Transport Canada AD CF-2021-05R3 requires operators to “advise all flight crews” of changes to the RFM, and thereafter to “operate the helicopter accordingly.” However, this AD does not specifically require those actions. 14 CFR 91.9 requires that no person may operate a civil aircraft without complying with the operating limitations specified in the RFM. Therefore, including a requirement in this AD to operate the helicopter according to the revised RFM would be redundant and unnecessary. Further, compliance with such a requirement in an AD would be impracticable to demonstrate or track on an ongoing basis; therefore, a requirement to operate the helicopter in such a manner would be unenforceable.

This AD prohibits installing any pilot collective stick and grip assembly on any helicopter unless the actions required by paragraphs (g)(2) and (3) of this AD have been accomplished, whereas Transport Canada AD CF-2021-05R3 does not.

Costs of Compliance

The FAA estimates that this AD affects 98 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Revising the existing RFM for your helicopter takes about 0.5 work-hour for an estimated cost of \$43 per helicopter and up to \$4,214 for the U.S. fleet.

Removing, cleaning, and performing an FPI of the pilot collective stick and grip assembly takes about 3 work-hours for an estimated cost of \$255 per helicopter and up to \$24,990 for the U.S. fleet per inspection cycle.

Installing an improved pilot collective stick tube takes about 5 work-hours and parts cost about \$1,256 for an estimated cost of \$1,681 per helicopter and up to \$164,738 for the U.S. fleet per replacement cycle.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2021-06-06, Amendment 39-21473 (86 FR 14366, March 16, 2021); and

b. Adding the following new airworthiness directive:

2022-04-06 Bell Textron Canada Limited: Amendment 39-21948; Docket No. FAA-2021-0729; Project Identifier MCAI-2021-00364-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-06-06, Amendment 39-21473 (86 FR 14366, March 16, 2021) (AD 2021-06-06).

(c) Applicability

This AD applies to Bell Textron Canada Limited Model 505 helicopters, serial

number (S/N) 65011 through 65347 inclusive, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6710, Main Rotor Control.

(e) Unsafe Condition

This AD was prompted by a report of a cracked pilot collective stick and grip assembly. The FAA is issuing this AD to detect a cracked pilot collective stick and grip assembly. The unsafe condition, if not addressed, could result in failure of the pilot collective stick and grip assembly and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) From March 31, 2021 (the effective date of AD 2021-06-06), before further flight, revise the Limitations section of the existing Rotorcraft Flight Manual (RFM) for your helicopter by inserting Bell 505 RFM Temporary Revision (TR) for Pilot Collective (ASB 505-21-20), BHT-505-FM-1, Temporary Revision (TR-6) or Bell 505 RFM TR for Pilot Collective (ASB 505-21-20), BHT-505-FM-2, Temporary Revision (TR-1), each dated March 3, 2021, as applicable to your helicopter. Using a different document with information identical to the information for the “Flight Crew” and “Configuration,” as applicable to your helicopter, in the RFM TR specified in this paragraph for your helicopter is acceptable for compliance with the requirements of this paragraph. This action may be performed by the owner/operator (pilot) holding at least a private pilot certificate and must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9(a)(1) through (4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417 or 135.439.

(2) Before further flight after the effective date of this AD, and thereafter at intervals not to exceed 25 hours time-in-service (TIS):

(i) Remove the pilot collective stick and grip assembly from the jackshaft assembly and clean the areas specified in Figure 2 of Bell Alert Service Bulletin 505-21-20, Revision C, dated March 11, 2021 (ASB 505-21-20 Rev C) with a clean cloth C-516C or equivalent moistened with dry cleaning solvent C-304 or equivalent.

(ii) Perform a fluorescent penetrant inspection (FPI) for a crack by following the Accomplishment Instructions, Part I, paragraph 5. (but not paragraphs 5.a. and b.) of ASB 505-21-20 Rev C. Perform this FPI in the areas specified in Figure 2 of ASB 505-21-20 Rev C. If there is a crack, before further flight, remove the pilot collective stick and grip assembly from service.

(3) Within 12 months after the effective date of this AD, remove the pilot collective stick tube from service and install pilot collective stick tube part number (P/N) M207-20M301-043 by following the Accomplishment Instructions, Part II, paragraphs 3. and 4. of ASB 505-21-20 Rev C except where this service information specifies discarding parts, you are required to remove those parts from service instead. Thereafter, remove from service pilot collective stick tube P/N M207-20M301-043 before it accumulates 6,250 total hours TIS.

(4) Completing the actions required in paragraph (g)(3) of this AD constitutes a terminating action for the requirements in paragraphs (g)(1) and (2) of this AD.

(5) As of the effective date of this AD, do not install any pilot collective stick and grip assembly on any helicopter unless the actions required by paragraphs (g)(2) and (3) of this AD have been accomplished.

(6) As of the effective date of this AD, relief under any Master Minimum Equipment List or Minimum Equipment List for the Audio Panel is prohibited when the aircraft is operated with a single pilot from the left seat.

(h) Credit for Previous Actions

If you performed an FPI of the pilot collective stick and grip assembly before the effective date of this AD using Bell Alert Service Bulletin 505-21-20, dated February 20, 2021, Bell Alert Service Bulletin 505-21-20, Revision A, dated February 26, 2021, or Bell Alert Service Bulletin 505-21-20, Revision B, dated March 3, 2021, you met the before further flight FPI requirement of paragraph (g)(2) of this AD.

(i) Special Flight Permits

A special flight permit to a maintenance facility may be granted provided that:

- (1) There are no passengers on-board,
- (2) The helicopter is flown from the copilot (left) seat only, and

(3) The GMA (intercom) is operative.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) AMOCs approved previously for AD 2021-06-06 are approved as AMOCs for the corresponding requirements in paragraph (g) of this AD.

(k) Related Information

(1) For more information about this AD, contact Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

(2) Bell Alert Service Bulletin 505-21-20, dated February 20, 2021, Bell Alert Service Bulletin 505-21-20, Revision A, dated February 26, 2021, and Bell Alert Service Bulletin 505-21-20, Revision B, dated March 3, 2021, which are not incorporated by reference, contain additional information about the subject of this AD. This service information is available at the contact information specified in paragraphs (l)(5) and (6) of this AD.

(3) The subject of this AD is addressed in Transport Canada AD CF-2021-05R3, dated March 19, 2021. You may view the Transport Canada AD at <https://www.regulations.gov> in Docket No. FAA-2021-0729.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference

of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Bell Alert Service Bulletin 505-21-20, Revision C, dated March 11, 2021.

(ii) [Reserved]

(4) The following service information was approved for IBR on March 31, 2021 (86 FR 14366, March 16, 2021).

(i) Bell 505 Rotorcraft Flight Manual Temporary Revision for Pilot Collective (ASB 505-21-20), BHT-505-FM-1, Temporary Revision (TR-6), dated March 3, 2021.

(ii) Bell 505 Rotorcraft Flight Manual Temporary Revision for Pilot Collective (ASB 505-21-20), BHT-505-FM-2, Temporary Revision (TR-1), dated March 3, 2021.

(5) For Bell service information identified in this AD, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>.

(6) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 10, 2022.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

